

Issue Brief – Class Size Reduction

MINIMUM SCHOOL PROGRAM

NUMBER MSP 4

SUMMARY

Two programs within the Minimum School Program provide revenue towards class size reduction. Most often, class size is expressed in terms of pupil-to-teacher ratios. The pupil teacher ratio is often used to describe the ‘average class size’ for a state or school district, however the pupil teacher ratio is the number of students in a school, school district, or state compared to the total number of teaching professionals. This brief includes information on Utah’s pupil teacher ratio, compares this ratio to other western states, and provides cost estimates to reduce the pupil teacher ratio in Utah.

DISCUSSION AND ANALYSIS

Since Utah emerged from the budget downturn years of FY 2002 to FY 2004, class sizes in the State’s public schools have emerged as a significant education budget issue. During the 2006 General Session, policymakers introduced legislation to allocate additional revenue for class size reduction. No class size reduction initiative emerged from the 2006 General Session.

Resuming the discussion on class size, the Governor recommended a class size reduction program for FY 2008. The STAR 20 (Student to Teaching Adult Ratio) establishes “a twenty student classroom learning environment in K-3rd grade with \$28,738,800 ongoing USF [Uniform School Fund Revenue].”¹

Similarly, the Utah State Board of Education has recommended two class size reduction initiatives. The Literacy and Math Achievement Program suggests decreasing K-12 literacy and math class sizes by one student per classroom each year for four years. The Utah State Office of Education estimates a total cost of \$28.7 million. The English Language Learner (ELL) Achievement Program is the second class size reduction program recommended by the State Board of Education. The Board recommends reducing the class size in classrooms with ELL students and providing academic interventions to ELL students to help them succeed.

Pupil Teacher Ratios

The National Center for Education Statistics defines the pupil teacher ratio as “the total reported students divided by the FTE classroom teachers.” In FY 2005 (school year 2004-2005) Utah’s pupil teacher ratio was the highest in the nation at 22.6. Vermont reported the lowest pupil teacher ratio at 11.3. The national average is 15.8.

The table titled “Pupil Teacher Ratios” compares pupil teacher ratios among the western states. Historically, Utah, Arizona, and California have the highest class sizes. Appendix A provides a more detailed look at staffing ratios in Utah for FY 2006.

| Pupil Teacher Ratios Utah and the Western United States 2004-2005 | | | |
|---|----------------|----------------|---------------------|
| State | Total Students | Total Teachers | Pupil Teacher Ratio |
| Utah | 503,607 | 22,287 | 22.6 |
| Arizona | 1,043,298 | 48,935 | 21.3 |
| California | 6,441,557 | 305,969 | 21.1 |
| Colorado | 765,976 | 45,165 | 17.0 |
| Idaho | 256,084 | 14,269 | 17.9 |
| Montana | 146,705 | 10,224 | 14.3 |
| Nevada | 400,083 | 20,950 | 19.1 |
| New Mexico | 326,102 | 21,730 | 15.0 |
| Oregon | 552,322 | 27,431 | 20.1 |
| Washington | 1,020,005 | 53,125 | 19.2 |
| Wyoming | 84,733 | 6,657 | 12.7 |
| United States | 956,762 | 60,598 | 15.8 |
| Source: National Center for Education Statistics. State Profiles. Based on Common Core of Data 2004-2005. Retrieved from: http://nces.ed.gov/programs/stateprofiles . Prepared by: Office of the Legislative Fiscal Analyst, January 2007. | | | |

¹ Governor Jon M. Huntsman, Jr. Budget Recommendations: Fiscal Year 2008, Fiscal Year 2007 Supplementals, December 12, 2006.

Class Sizes

The Utah State Office of Education does collect some information from school districts on actual class sizes. For these reports, the USOE relies primarily on Utah Performance Assessment System for Students (U-PASS) school level reports. These reports provide average class sizes for a given school and are not combined into district or state level composite reports.

Each U-PASS School Performance Report provides school level class size data on the number of classes per grade level (K-6) or class type (secondary) and the average class size by grade or type for each school in the state. This information provides more useful class size data than the pupil teacher ratio, however because the information is not aggregated to the district level comparisons statewide become difficult. School districts may have differing classifications of certain classes – especially in secondary schools.

The “Average Class Size Comparisons” table provides the school-average class size by grade for selected Utah schools. Information provided in the table indicates the variations in class sizes among schools and provide some perspective to the pupil teacher ratios reported nationally.

Funding Programs

Two programs within the Minimum School Program focus on class size reduction, the Class Size Reduction program and the Board Leeway.

- Class Size Reduction – The Legislature began appropriating funding for class size reduction in 1994. Since 1994, the annual allocation for class size reduction has increased to more than \$79 million (H.B. 3, 2007 General Session).

Program funding is targeted for class size reduction efforts in Kindergarten through the 8th grade. School districts and charter schools receive program revenues on a formula basis. The formula distributes revenue on a WPU basis to school districts and charter schools based on their prior year K-8 ADM (student enrollment) plus student growth in grades K-8.

Fifty percent of program revenues must support class size reduction efforts in grades K-2. If the average class size in these grades falls below 18, districts and charter schools may seek State Board approval to use class size reduction funds in grades 3-8. Up to 20 percent of program funds

| Average Class Size Comparisons Selected Utah Schools - 2005 | | | | | | | |
|--|-------|------|------|------|------|------|------|
| School District or Charter School | Grade | | | | | | |
| | K | 1 | 2 | 3 | 4 | 5 | 6 |
| Alpine - Aspen | 20.8 | 25.0 | 25.0 | 18.8 | 30.0 | 30.0 | 27.0 |
| Beaver - Minersville | 20.0 | 21.0 | 18.0 | 17.0 | 13.0 | 13.0 | 9.0 |
| Cache - Wellsville | 24.3 | 24.6 | 23.6 | 24.6 | 20.6 | 29.3 | |
| Daggett - Flaming Gorge | 7.0 | 4.0 | | 6.0 | 1.0 | 4.0 | |
| Granite - Lincoln | 22.5 | 26.0 | 24.6 | 19.5 | 19.3 | 19.3 | 19.6 |
| Jordan - Draper | 24.6 | 20.8 | 23.3 | 25.2 | 26.8 | 22.8 | |
| Park City - Jeremy Ranch | 20.8 | 23.0 | 23.6 | 26.2 | 24.0 | 24.8 | |
| Rich - South Rich | 15.0 | 10.0 | 12.0 | 14.0 | 16.0 | 17.0 | |
| San Juan - Bluff | 7.0 | 8.0 | 11.0 | 9.0 | 12.0 | 8.0 | 4.0 |
| Tooele - Stansbury | 18.1 | 26.0 | 25.8 | 24.6 | 27.2 | 31.5 | 30.0 |
| Uintah - LaPoint | 20.5 | 20.5 | 13.0 | 20.5 | 14.5 | 39.0 | |
| Washington - Hurricane | 20.0 | 21.3 | 21.3 | 21.3 | 24.6 | 21.0 | |
| Weber - Municipal | 15.0 | 24.5 | 21.6 | 26.5 | 23.5 | 33.0 | 31.5 |
| Salt Lake - Riley | 25.6 | 21.7 | 25.3 | 23.6 | 25.3 | 20.6 | 28.6 |
| Ogden - Polk | 24.6 | 29.6 | 24.6 | 23.3 | 31.0 | 24.6 | |
| Provo - Provost | 27.6 | 19.0 | 18.0 | 21.3 | 33.0 | 26.5 | 32.5 |
| Logan - Bridger | 21.2 | 25.3 | 22.4 | 20.6 | 29.0 | 26.0 | |
| Timpanogos Academy | 25.0 | 25.0 | 25.0 | 25.0 | 25.0 | 24.5 | 25.0 |
| Ogden Preparatory Academy | 12.5 | 12.5 | 8.3 | 8.3 | 13.0 | 13.0 | 12.5 |
| Summit Academy | 4.0 | 7.8 | 8.7 | 25.3 | 6.5 | 3.8 | 9.2 |
| Freedom Academy | 4.3 | 10.2 | 7.4 | 3.4 | 5.0 | 24.5 | 2.1 |

Source: Utah State Office of Education. January 2007.

Prepared by: Office of the Legislative Fiscal Analyst. (01/07BL).

| Minimum School Program Annual Class Size Reduction Appropriations FY 1993 to FY 2007 | | | |
|--|----------------------|---------------|----------------|
| Fiscal Year | Annual Appropriation | Annual Change | Percent Change |
| 2007 | \$74,378,341 | \$4,215,901 | 6.0% |
| 2006 | 70,162,440 | 4,259,494 | 6.5% |
| 2005 | 65,902,946 | 1,925,396 | 3.0% |
| 2004 | 63,977,550 | 535,626 | 0.8% |
| 2003 | 63,441,924 | 856,992 | 1.4% |
| 2002 | 62,584,932 | 3,253,470 | 5.5% |
| 2001 | 59,331,462 | 3,105,585 | 5.5% |
| 2000 | 56,225,877 | 8,385,261 | 17.5% |
| 1999 | 47,840,616 | 1,528,938 | 3.3% |
| 1998 | 46,311,678 | 1,344,616 | 3.0% |
| 1997 | 44,967,062 | 26,334,294 | 141.3% |
| 1996 | 18,632,768 | 3,181,496 | 20.6% |
| 1995 | 15,451,272 | 4,398,174 | 39.8% |
| 1994 | 11,053,098 | 6,663,558 | 151.8% |
| 1993 | 4,389,540 | | |
| Total | \$704,651,506 | | |

Source: Office of the Legislative Fiscal Analyst. Annual Appropriations Reports. 1993 to 2007.

may support capital facility projects. Rapidly growing districts/charters may use a higher percentage based on statutory provisions.

- Board Leeway – Local school boards must use revenue generated by the Board Leeway for class size reduction efforts. However, if a local school board determines that district class sizes are not excessive, it may seek authorization to use program revenue to support other district functions. School boards must declare in a public meeting, prior to levying the Board Leeway, that class sizes are not excessive. Statute also requires that school districts to certify to the State Board of Education that class size needs are being met and identify the other school related uses for Board Leeway revenues before the district can use any revenue generated from the tax.

| Estimated Board Leeway Revenue 2006-2008 | | | | |
|---|-------------|--------------|--------------|-------------------|
| School Year | Revenue | | | Percent Change |
| | State | Local | Total | |
| 2005-06 | \$4,527,413 | \$43,757,326 | \$48,284,739 | |
| 2006-07 | 6,547,704 | 47,977,038 | 54,524,742 | 12.9% |
| 2007-08 | 9,782,744 | 52,402,304 | 62,185,048 | 14.0% |
| Source: Utah State Office of Education, Finance and Statistics. Estimated Board Leeways. 2006-2008. | | | | |

Class Size Reduction Cost estimates

Estimates to reduce class size vary depending on the targeted outcome desired. Due to the lack of reliable standardized data on actual class size, most cost estimates to reduce class size use pupil teacher ratios. In reality, class size reduction cost estimates are really estimates on the cost to reduce the pupil teacher ratio. The Governor's STAR 20 initiative uses a student to teaching adult ratio.

During the 2006 General Session, the Utah State Office of Education produced a cost estimate to reduce the pupil teacher ratio in grades K-3 to 20 students per teacher. The USOE estimated reduction costs at \$36.3 million for additional teachers, \$396 million for additional school facilities, and \$6.9 million for district and school level administrative costs. The pupil teacher reduction cost estimate totaled more than \$439 million.

Following this same framework, the Analyst has produced a similar pupil teacher ratio reduction cost estimate. The table below details this cost estimate. The table provides two scenarios, reducing Utah's pupil teacher ratio by one and reducing it to the national average of 15.8. Further, the estimate differentiates the teacher costs by providing two estimates, one for average beginning teacher compensation and the second for statewide average teacher compensation.

The estimate indicates that it may cost between \$45.5 million and \$57.6 million to reduce Utah's pupil teacher ratio by one. Further, it may cost \$399.9 to \$506.2 million to reduce Utah's pupil teacher ratio to the national average. These estimates include only the teacher compensation related portions of the cost estimate. Capital facility costs, as well as school and district level administration costs, generally fall to the local school districts. Including these costs in the estimate increases the total cost of pupil-teacher ratio reductions significantly. To reduce the pupil-teacher ratio by one, these scenarios indicate that costs increase to \$560.7 million to \$572.8 million.

Utah Pupil-Teacher Ratio Reduction

Cost Estimates to Reduce Utah's Pupil Teacher Ratio by One & to the National Average

| | Reduce by One | Reduce to National Avg. |
|---|--------------------------|------------------------------------|
| Target Pupil-Teacher Ratio 2004-05: | 21.4 | 15.8 |
| Utah Pupil-Teacher Ratio 2004-05: | 22.4 | 22.4 |
| Difference: | 1.0 | 6.6 |
| Teachers | | |
| Total FTE Teachers in Utah 2004-05: | 22,090 | 22,090 |
| Total Enrollment in Utah 2004-05: | 495,298 | 495,298 |
| Compensation | | |
| Utah Average Beginning Teacher Compensation (Estimated): | \$43,196 | \$43,196 |
| Utah Average Teacher Compensation: | \$54,687 | \$54,687 |
| Required Number of Teachers | | |
| New FTE Teachers Needed for Target Ratio: | 1,055 | 9,258 |
| Total FTE Teachers Required for Target Ratio: | 23,145 | 31,348 |
| Estimated Compensation Cost | | |
| Estimated FTE Teacher Cost - Beginning Compensation: | \$45,561,687 | \$399,907,474 |
| Estimated FTE Teacher Cost - Average Compensation: | \$57,682,008 | \$506,290,862 |
| Facility Estimates (Based on Elementary School Cost Estimates) | | |
| Estimated FTE Teachers Per School: | 25 | 25 |
| Total New Schools Required to Accommodate a 15.8 Ratio: | 42 | 370 |
| Estimated Cost of New Elementary School: | \$12,000,000 | \$12,000,000 |
| Total Estimated Facility Costs: | \$506,287,850 | \$4,443,827,848 |
| School & District Administration Estimates (per School) | | |
| School Level Administration: | \$179,400 | \$179,400 |
| District Administration: | \$30,800 | \$30,800 |
| Total Estimated Administration per School: | \$210,200 | \$210,200 |
| Total Estimated School & District Administration Cost: | \$8,868,476 | \$77,841,051 |
| Total Estimated Pupil-Teacher Ratio Reduction Costs | | |
| Beginning Compensation | \$560,718,013 | \$4,921,576,374 |
| Average Compensation | \$572,838,334 | \$5,027,959,761 |
| Sources: Utah State Office of Education, Staffing Ratios (Utah). National Center for Education Statistics (US). Prepared by: Office of the Legislative Fiscal Analyst (01/07BL). | | |

APPENDIX A**Staffing Ratios
FY2006**

| Local Education Agencies | Elementary Teachers (K-6) | Secondary Teachers (7-12) | All K-12 Classroom Teachers | Special Education Teachers | All Teachers | Elementary Counselors | Secondary Counselors | School Nurses* | School Administrators |
|--------------------------|---------------------------|---------------------------|-----------------------------|----------------------------|--------------|-----------------------|----------------------|-----------------|-----------------------|
| DISTRICT | | | | | | | | | |
| Alpine | 25.53 | 28.89 | 26.88 | 5.82 | 24.81 | [3] | 376.10 | 4,115.85 | 551.61 |
| Beaver | 23.53 | 21.39 | 22.53 | 3.12 | 21.08 | [3] | 336.00 | [3] | 343.67 |
| Box Elder | 24.07 | 24.31 | 24.18 | 3.63 | 21.86 | 11,190.00 | 322.07 | 5,213.00 | 444.08 |
| Cache | 26.73 | 23.93 | 25.42 | 3.21 | 23.40 | [3] | 408.35 | 8,840.67 | 473.61 |
| Carbon | 22.57 | 21.83 | 22.19 | 5.43 | 19.64 | 971.86 | 250.08 | 4,918.18 | 295.09 |
| Daggett | 15.52 | 10.70 | 13.03 | [2] | 12.26 | [3] | [3] | 1,560.00 | 346.67 |
| Davis | 26.31 | 23.87 | 25.16 | 5.37 | 23.18 | 1,131.22 | 411.00 | 4,842.22 | 519.25 |
| Duchesne | 19.68 | 18.42 | 19.06 | 8.45 | 17.94 | [3] | [3] | 6,325.00 | 298.82 |
| Emery | 20.98 | 20.04 | 20.51 | 2.26 | 18.82 | [3] | 2,284.00 | 3,078.67 | 243.05 |
| Garfield | 18.16 | 14.39 | 16.16 | 4.86 | 15.19 | 878.18 | 507.06 | 1,828.00 | 184.65 |
| Grand | 19.25 | 18.17 | 18.72 | 6.11 | 17.38 | [3] | 337.00 | 14,150.00 | 283.00 |
| Granite | 26.01 | 21.14 | 23.56 | 5.84 | 21.75 | 18,427.50 | 326.33 | 4,310.40 | 476.96 |
| Iron | 26.16 | 23.36 | 24.87 | 4.16 | 22.58 | 1,144.50 | 409.88 | 4,031.00 | 497.65 |
| Jordan | 27.33 | 26.03 | 26.73 | 7.83 | 25.00 | 41,315.00 | 462.82 | 75,147.00 | 474.89 |
| Juab | 23.06 | 25.76 | 24.18 | 5.42 | 22.25 | [3] | 424.75 | 3,807.84 | 308.25 |
| Kane | 21.05 | 15.47 | 18.00 | 2.93 | 16.77 | [3] | 368.67 | 1,177.00 | 339.19 |
| Logan | 23.82 | 20.11 | 22.01 | 3.45 | 20.09 | [3] | 324.39 | 7,513.33 | 414.34 |
| Millard | 21.94 | 17.95 | 19.79 | 5.38 | 18.56 | 952.10 | 1,050.75 | 4,112.86 | 295.59 |
| Morgan | 24.54 | 21.02 | 22.71 | 3.33 | 21.13 | [3] | 995.88 | 8,012.00 | 461.52 |
| Murray | 22.94 | 23.76 | 23.33 | 5.50 | 21.78 | 1,817.78 | 381.88 | 3,163.50 | 421.80 |
| Nebo | 27.17 | 25.17 | 26.31 | 5.84 | 24.09 | 1,876.13 | 423.42 | 3,706.46 | 522.60 |
| North Sanpete | 20.59 | 19.69 | 20.17 | 3.84 | 18.89 | [3] | [3] | 4,568.00 | 304.53 |
| North Summit | 21.02 | 19.48 | 20.27 | 1.46 | 17.92 | 1,032.00 | 304.00 | 1,944.00 | 265.57 |
| Ogden | 25.51 | 21.29 | 23.55 | 6.05 | 21.57 | 537.24 | 411.27 | [3] | 380.92 |
| Park City | 21.35 | 17.39 | 19.27 | 4.53 | 18.17 | 451.40 | 310.48 | 2,143.00 | 428.60 |
| Piute | 16.05 | 10.06 | 12.49 | 3.94 | 12.06 | 469.70 | 417.65 | 990.00 | 230.23 |
| Provo | 23.94 | 22.50 | 23.28 | 5.68 | 20.86 | [3] | 496.78 | 2,839.33 | 497.93 |
| Rich | 13.69 | 12.93 | 13.29 | 2.50 | 12.63 | 400.00 | 468.89 | 3,161.54 | 208.63 |
| Salt Lake | 23.33 | 21.85 | 22.70 | 5.82 | 20.54 | 1,076.76 | 383.95 | 3,362.79 | 481.41 |
| San Juan | 19.75 | 13.92 | 16.27 | 1.95 | 14.94 | 4,254.55 | 425.80 | 1,436.50 | 207.74 |
| Sevier | 25.10 | 20.60 | 22.81 | 2.65 | 20.25 | 3,729.95 | 538.33 | 4,217.00 | 340.14 |
| South Sanpete | 22.84 | 17.16 | 19.71 | 3.41 | 18.29 | [3] | 325.75 | 5,438.00 | 247.18 |
| South Summit | 20.24 | 19.66 | 19.98 | 3.16 | 19.07 | 725.00 | 404.67 | 1,332.00 | 333.00 |
| Tintic | 13.61 | 12.47 | 13.01 | 1.18 | 12.12 | 675.00 | 342.50 | [3] | 201.48 |
| Tooele | 25.26 | 23.54 | 24.53 | 5.58 | 22.40 | 2,282.33 | 419.55 | 5,731.00 | 446.06 |
| Uintah | 21.90 | 22.67 | 22.23 | 4.02 | 19.80 | [3] | 240.95 | 8,981.67 | 359.27 |
| Wasatch | 28.09 | 19.40 | 23.52 | 3.91 | 21.31 | 1,060.00 | 374.11 | 5,618.67 | 413.14 |
| Washington | 23.69 | 23.39 | 23.56 | 3.79 | 21.51 | 1,198.13 | 343.07 | 846.63 | 487.08 |
| Wayne | 18.78 | 12.19 | 15.12 | 2.26 | 14.03 | [3] | [3] | 3,168.75 | 260.00 |
| Weber | 24.84 | 26.13 | 25.42 | 5.53 | 22.91 | 916.97 | 319.18 | 2,624.37 | 472.83 |
| DISTRICT TOTAL | 25.24 | 23.36 | 24.37 | 5.52 | 22.40 | 314.19 | 389.85 | 3,969.14 | 458.86 |
| CHARTER TOTAL | 24.21 | 19.95 | 22.39 | 4.30 | 21.67 | 10,559.70 | 312.91 | 1,978.72 | 474.72 |
| STATE TOTAL | 25.22 | 23.28 | 24.32 | 5.51 | 22.39 | 2,355.34 | 387.96 | 3,879.36 | 459.21 |

NOTE:

[1] Reported students, but did not assign teachers in this category.

[2] Assigned teachers, but did not report any students in this category.

[3] No personnel assigned for this category.

*Includes nurses employed by the LEA and contracted by the Health Department.

Source: Utah State Office of Education, Finance and Statistics Section. January 2007.